

What is claimed is:

- SUB
A1
1. An ac generator comprising a stator and a rotor:

said stator being disposed within a bracket having an exhaust window and generating a three-phase ac current by a rotating field of said rotor; and

said rotor comprising a rotor coil for generating a magnetic flux, a pole core composed of first and second pole core members disposed so as to cover said rotor coil and having pawl-shaped magnetic poles projecting in staggered relationship, a plurality of permanent magnets disposed on both side surfaces of said pawl-shaped magnetic pole for reducing the leakage of the magnetic flux between the side surfaces of the adjacent pawl-shaped magnetic poles, and a fan mounted to each of opposite axial ends of the rotor for cooling a heat-generating member heated due to a generator output current;

said permanent magnets being permanent magnets of samarium-iron alloy containing Ti and B.

2. The ac generator as claimed in claim 1, wherein said permanent magnets are plastic magnets made of magnet powder bonded together by a resin.

3. The ac generator as claimed in claim 1, wherein said permanent magnets are bonded magnets of $\text{Sm}_{8.2} - \text{Fe}_{75.6} - \text{Ti}_{2.3} - \text{B}_{0.9} - \text{N}_{13}$.

SUB
A2

4. The ac generator as claimed in claim 1, wherein said permanent magnets are supported by corrosion-resistive holding members surrounding the magnet.

5. The ac generator as claimed in claim 1, wherein at least one portion of the side opposing to the pawl-shaped magnetic pole side surfaces of said permanent magnets is resin-coated.

6. The ac generator as claimed in claim 1, wherein said permanent magnets are independently attached to each of the magnetic poles of said first and second pole core members.

7. The ac generator as claimed in claim 1, wherein said first and second pole core members have on their outer circumferences restricting means for restricting the displacement of said magnetic poles in the radial direction due to a centrifugal force during the rotor rotation.

8. The ac generator as claimed in claim 7, wherein said restricting means is disposed in the vicinity of the tips of the magnetic poles of said first and second pole core members to restrict the displacement of said pole tips.

9. The ac generator as claimed in claim 7, wherein said restricting means is a corrosion-resistant annular member circumferentially extending over the entire circumference of said rotor.